OPTO-EDU A59.2228 TE-Cooling M52/C-mount USB3.0 CMOS Camera 4.2M~61M

Our Product Introduction

Basic Information

- Place of Origin: China
- Brand Name: OPTO-EDU
- Certification: CE, Rohs
- Model Number: A59.2228
- Minimum Order Quantity: 1 pc
- Price: FOB $1~1000, Depend on Order Quantity
- Packaging Details: Carton Packing, For Export Transportation
- Delivery Time: 5~20 Days
- Payment Terms: T/T, West Union, Paypal
- Supply Ability: 5000 pcs/ Month

Product Specification

- Applications: Microscope
- Certification: CE|Rohs
- Output: USB 3.0
- Product Name: Microscope Accessories
- Senser: CMOS
- Compatible: Windows XP/Vista
- Highlight: **M52/C-mount CMOS Camera**, **USB3.0 CMOS Camera**, **4.2M~61M CMOS Camera**

More Images

Product Description

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A59.2228

TE-Cooling M52/C-mount USB3.0 CMOS Camera, 4.2M~61M

A59.2228 Features

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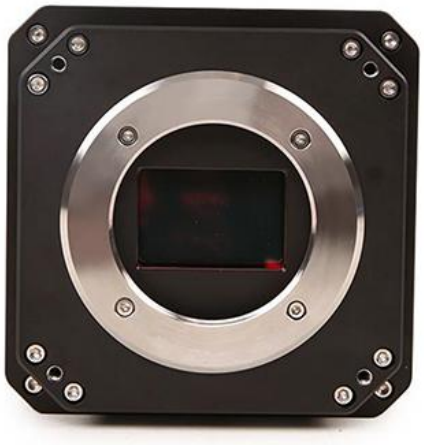

A59.2228
TE-Cooling M52/C-mount
USB3.0 CMOS Camera, 4.2M~61M

The A59.2228 series sCMOS Camera adopts SONY Exmor or GSENSE with big pixel size or full-frame CMOS sensor as the image-picking device and USB3.0 is used as the transfer interface to increase the frame rate.With the two-stage Peltier cooling sensor chip to -40°C below ambient temperature. This will greatly increase the signal to noise ratio and decrease the image noise. Smart structure is designed to assure the heat radiation efficiency and avoid the moisture problem. Electric fan is used to increase the heat radiation speed.A59.2228 comes with advanced video & image processing application; Providing Windows/Linux/OSX multiple platform SDK; Native C/C++, C#/VB.NET, DirectShow, Twain Control API;The A59.2228 can be widely used in low light environment and microscope fluorescence image capture and analysis, as well as the astronomy deep sky application.

◆ Standard camera with SONY Exmor or GSENSE CMOS sensors;
◆ Big pixels or full-frame sensor size;
Two-stage TE-cooling with controllable electric fan;
◆ Sensor chip cooling up to-40°C below ambient temperature;
◆ Working temperature can be regulated to specified temperature in 5 minutes;
◆ Smart structure to assure the heat radiation efficiency and avoid the moisture problem;
◆ IR-CUT/ARcoated windows(Optional);
◆ M52 x0.75 or C-mount
◆ USB3.0 5Gbit/second interface ensuring high speed data transmission;
◆ Up to 1000 seconds long time exposure;
◆ Embedded up to 16bit hardware ISP module;
◆ Including 2-D denoising and sharpening
Ultra-Fine color engine with perfect color reproduction capability;
◆ Support the capture of video and image in software / hardware trigger mode
With advanced video & image processing application;
◆ Support both video and trigger modes;
◆ Providing Windows/Linux/Mac OS multiple platforms SDK;
◆ Native C/C++, C#/VB.NET, DirectShow, Twain control API;

A59.2228 Specification

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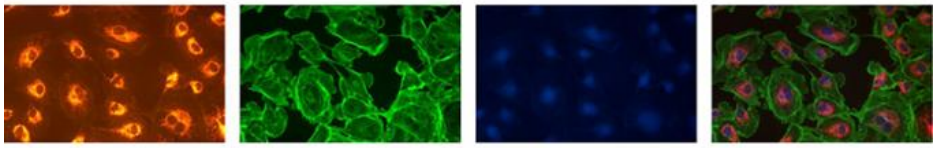
A59.2228 Models	Sensor Model and Size	Pixel(μm)	SNR	FPS	Sample Average	Time of Exposure

61MAM	61M/IMX455(M, RS) 2.7"(35.98x23.99) Full Frame	3.76 x 3.76	871mv with 1/30s 0.039mv with 1/30s 88.3dB/47.1dB	6.1@9568x6380(16bit) 19.1@4784x3190 55.6@3184x2124 191@1040x706 8 Bit / 16 Bit	1x1 2x2 3x3 9x9	0.1ms~1000s
61MAC	61M/IMX455(C, RS) 2.7"(35.98x23.99) Full Frame	3.76 x 3.76	484.5mv with 1/30s 0.039mv with 1/30s 85.8dB/47.0dB	6.1@9568x6380(16bit) 19.1@4784x3190 55.6@3184x2124 191@1040x706 8 Bit / 16 Bit	1x1 2x2 3x3 9x9	0.1ms~1000s
24MAC	24M/IMX410(C, RS) 2.7"(36.02x24.00) Full Frame	5.94 x 5.94	573mv with 1/30s 0.037mv with 1/30s 87.3dB/50.2dB	15.3@6064x4040(14bit) 41@3024x2012 114@2016x1342 8 Bit / 14 Bit	1x1 2x2 3x3	0.1ms~1000s
4.2MAM	4.2M/GSENSE2020e (M,NIR,RS) 1.2"(13.31x13.31)	6.5 x 6.5	8.1x107 (e-/((W/m2).s)) Peak QE 64.2% @595nm 0.12(e-/s/pix) @-10C 81.6dB/46.5dB	45@2048x2048 45@1024 x 1024 8 Bit / HDR 16 Bit	1x1 2x2	0.1ms~1000s
4.2MBM	4.2M/GSENSE2020BSI (M,UV,RS) 1.2"(13.31x13.31)	6.5 x 6.5	1.1x108 (e-/((W/m2).s)) Peak QE 93.7% @550nm 0.15(e-/s/pix) @-15C 79.1dB/47dB	45@2048 x2048 45@1024 x1024 8 Bit / HDR 16 Bit	1x1 2x2	0.1ms~1000s
4.2MCM	4.2M/GSENSE400BSI (M,UV,RS) 2.0"(22.53x22.53)	11 x 11	3.25x108 (e-/((W/m2).s)) Peak QE 95.3% @560nm 1.5(e-/s/pix) @-10C 93.9dB/48.8dB	44@2048 x2048 44@1024 x1024 8 Bit / HDR 16 Bit	1x1 2x2	0.1ms~1000s



Other Specification	
Spectral Range	200-1000nm(The spectral response range of each model is different. Please refer to the product manual of each model for detailed parameters)
Protect Windows	IR CUT (AR protection glass is optional)
White Balance	ROI White Balance/ Manual Temp Tint Adjustment/NA for Monochromatic Sensor
Color Technique	Ultra-Fine Color Engine/NA for Monochromatic Sensor
Capture/Control SDK	Windows/Linux/macOS/Android Multiple Platform SDK(Native C/C++, C#/VB.NET, Python, Java, DirectShow, Twain, etc)
Recording System	Still Picture and Movie(Free running mode or trigger mode)
Cooling System*	Two-stage TE-cooling System -40 °C below Camera Body Temperature
IO Interface	One optocoupler isolation input, one optocoupler isolation output, two direct connection GPIO
Operating Environment	

Operating Temperature(in Centidegree)	-10~ 50
Storage Temperature(in Centidegree)	-20~ 60
Operating Humidity	30~80%RH
Storage Humidity	10~60%RH
Power Supply	DC 5V over PC USB Port
	External Power Adapter for Cooling System, DC19V, 4A
Software Environment	
Operating System	Microsoft® Windows® XP / Vista / 7 / 8 /10 /11 (32 & 64 bit)
	OSx(Mac OS X)
	Linux
PC Requirements	CPU: Equal to Intel Core2 2.8GHz or Higher
	Memory:2GB or More
	USB Port:USB3.0 High-speed Port
	Display:17" or Larger
	CD-ROM

A59.2228 Structure

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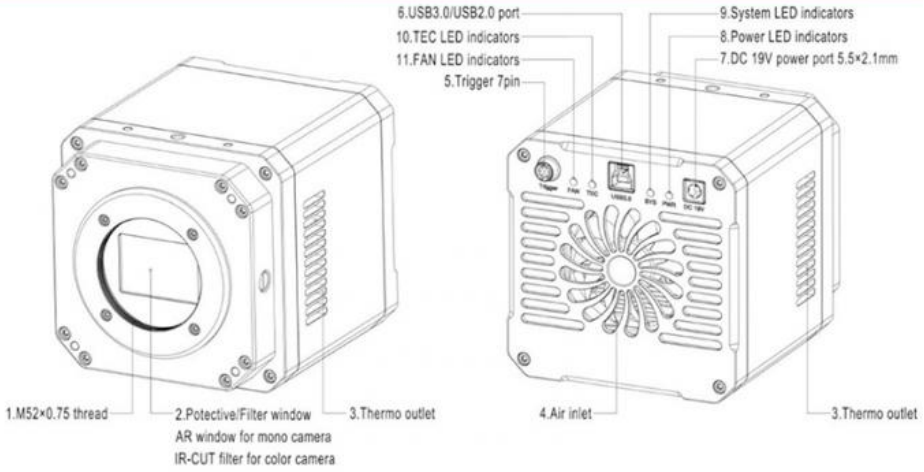

A59.2228 Packing List

A	Carton L:50cm W:30cm H:30cm (20pcs, 12~17Kg/ carton), not shown in the photo(TBD)	
B	3-A safety equipment case: L:28cm W:23cm H:15cm (1pcs, 2.8Kg/ box); Carton size: L:28.2cm W:25.2cm H:16.7cm(TBD)	
C	One MAX series camera	
D	Power adapter: input: AC 100~240V 50Hz/60Hz, output: DC19 V 4A	
E	High-Speed USB3.0 A male to B male gold-plated connectors cable /1.5m	
F	IO cable	
G	CD (Driver & utilities software, Ø12cm)	
L	Calibration kit	106011/TS-M1(X=0.01mm/100Div.); 106012/TS-M2(X,Y=0.01mm/100Div.); 106013/TS-M7(X=0.01mm/100Div., 0.10mm/100Div.)

A59.2228 New Appearance

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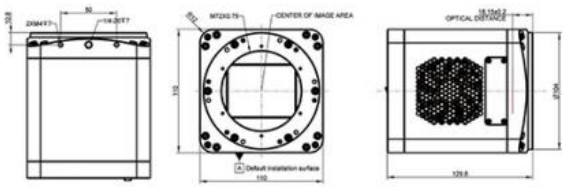
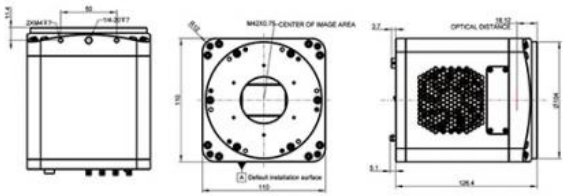
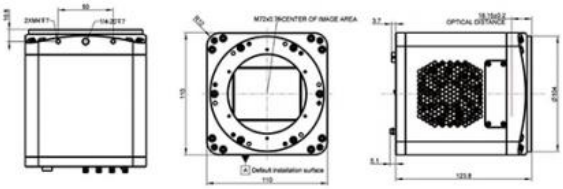
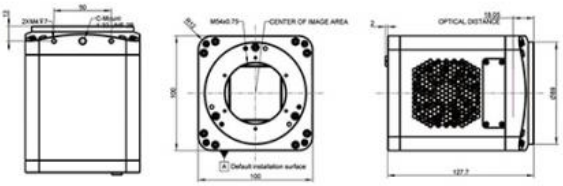






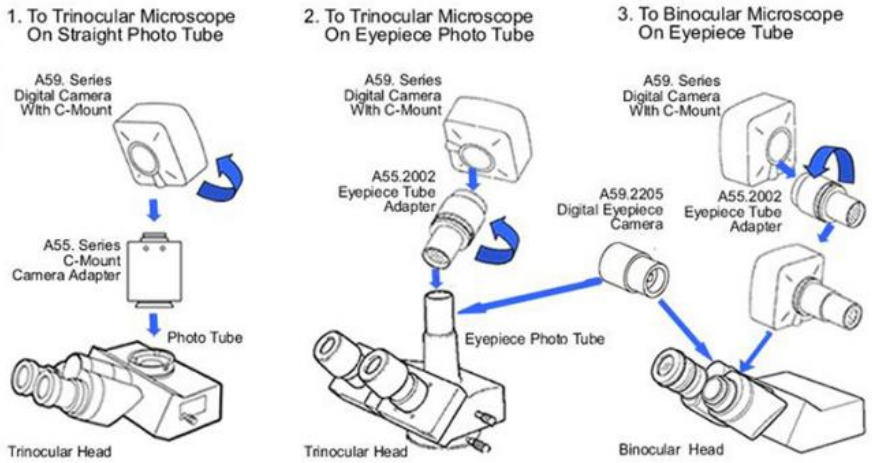


Camera Connect To Microscope

A55.2002
C-Mount to 23.2mm Adapter
For Microscope

A55.2004
C-Mount to 31.75mm Adapter
For Telescope

OPTO-EDU How Camera Connect To Microscope



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